



Impacting Society through Engineering Design Research

An alternative approach

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Impacting Society through Engineering Design Research

– An alternative approach.

Thomas Howard, ICED11 Assistant Chair

At a time when Apple has a greater spending budget than the USA, when top Technology Developers' R&D-purses bulge and when companies attract the best engineering graduates dedicated to the development of complex products; what role is there for the removed design researcher on a shoe string budget? In the aftermath of the ICED11 conference I have taken time to evaluate and reflect upon the design research landscape and where our impacts lie.

For me, the highlight of the ICED11 conference was the RepRap-Arduino presentation by Adrian Bowyer and David Cuartilles (see <http://podcast.llab.dtu.dk/feeds/iced11-conference/>). Having researched at the same institute as Adrian for many years I have followed with excitement the RepRap project since its conception. However, despite the project's appeal to my imagination, I have always wondered why it is considered as a Design Research project when it appears to be a Design Practice project (essentially product development.) I have come to the conclusion that it is not Design Research as we know it, as "Design Research investigates the process of designing in all its many fields." [Wikipedia]

However, if not Design Research, what then is it? And, if it is just Design Practise then why are products such as Arduino and RepRep developed under research budgets at universities? In answer, these 'Design Practice' projects concern the development of products that would not be created had it been left solely to a capitalist environment and thus require state/university funding. These products and associated business models are not for profit but to provide benefit, value and 'impact to society'.

The computer science community has undertaken similar design practice projects for many years throughout the open source revolution, and yet fields like Human Computer Interaction (a form of Design Research) sit happily and productively alongside. I would like to propose that the design research community takes heed. Instead of simply tolerating with little understanding the difference between university-based Design Practice and Design Research, we should acknowledge this difference and at the same time actively welcome both forms into our community creating a separate theme for Design Practice. Let us therefore benefit the society through the improved understanding of, methods of, and approaches to design, but also through, producing empowering-products which address societal needs, unbound by the necessity for profit.

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